

**IN THE SPECIFICATION:**

**Please replace the paragraph beginning at page 9, line 33, and bridging to page 10, line 5, with the following rewritten paragraph:**

According to the fourth aspect of the invention, in the heat pump apparatus of the first aspect, the apparatus further comprises a pressure sensor and a temperature sensor which are disposed between the compressor and the expander and which respectively detect pressure and temperature of the refrigerant, and power generator current controller for controlling a current value of the power generator by signals from the pressure sensor and the temperature sensor such that the pressure of the refrigerant becomes optimal pressure.

**Please replace the paragraph beginning at page 10, line 8, with the following rewritten paragraph:**

According to the fifth aspect of the invention, in the heat pump apparatus of the first aspect, the apparatus further comprises a pressure sensor and a temperature sensor which are disposed between the compressor and the expander and which respectively detect pressure and temperature of the refrigerant, and power generator current controller for controlling an amount of generated electricity of the power generator by signals from the pressure sensor and the temperature sensor such that the pressure of the refrigerant becomes optimal pressure.